

# Econ 2 Midterm 1

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**TA Name and Section:** \_\_\_\_\_

## Exam Rules

1. The exam starts at 3:30 and ends at 4:45.
2. There are 35 multiple choice questions
3. Make sure to fill in the scantron including your name and ID. You will not be given extra time at the end.
4. Calculators (including graphing calculators) are allowed.
5. Please put all materials other than your calculator and a pen or pencil in your bag. If you have a phone or other item out for any reason you will be given a 0 on the exam.
6. If you have a question or need to go to the bathroom raise your hand and a TA will help you

For Questions 1-3, use the following information. Assume 2016 is the base year

	2016		2017		2018	
	p	q	p	q	p	q
Apples	\$1	100	\$2	110	\$2	120
Bananas	\$2	80	\$4	100	\$3	120
Carrots	\$3	60	\$6	80	\$8	100

- Find the real GDP growth rate from 2017 to 2018
  - 15%
  - 20%
  - 22.2%
  - 27.3%
- Find the inflation rate from 2017 to 2018 using the GDP deflator approach (round to nearest whole number)
  - 2%
  - 4%
  - 6%
  - 8%
- Find the inflation rate from 2017 to 2018 using the CPI approach and a basket of 1 apple, 1 banana, and 1 carrot (again rounding to the nearest whole number)
  - 2%
  - 4%
  - 6%
  - 8%
- A US firm buys a computer from a Taiwanese company that they plan to give to one of their workers to help them be more productive. This transaction alone causes US GDP to
  - Increase, since the computer is a consumption good
  - Increase, since the computer is an investment good
  - Decrease, since the computer is imported
  - None of the above

5. Which of the following will NOT increase the investment expenditure component of GDP in the US
- (a) A US farmer plans to sell 1000 bushels of wheat this year, but actually only sells 900 bushels so he puts the remainder in a silo to sell next year
  - (b) A Chinese firm builds a new factory in Los Angeles
  - (c) A US consumer buys a house newly built this year
  - (d) Goldman Sachs, an investment bank, buys 100 treasury bonds
6. All of the following will cause the CPI to be a biased measure of the standard of living EXCEPT
- (a) CPI cannot include the prices of imported goods
  - (b) The typical purchases of a consumer today are different than when the CPI was created
  - (c) When prices increase, consumers substitute to cheaper goods
  - (d) The quality of goods has changed significantly over time
7. If the price level in 1930 was 40 and the price level in 2018 is 120, how much is \$3.00 in 1930 worth in 2018 dollars?
- (a) \$1.00
  - (b) \$3.00
  - (c) \$9.00
  - (d) \$12.00
8. Which of the following is true about different measures of inflation?
- (a) Using the CPI approach usually produces a lower inflation rate than using the PCE deflator
  - (b) CPI uses a fixed basket, while PCE allows for a changing basket
  - (c) CPI only measures consumption goods while the PCE deflator also includes producer goods
  - (d) The PCE deflator is exactly the same as the GDP deflator
9. In 2017, the nominal interest rate was 10% and the inflation rate was 7%. In 2018, the nominal interest rate was 3% and the inflation rate was 0%. Which year had a higher real interest rate?
- (a) 2017
  - (b) 2018
  - (c) They have the same real interest rate
  - (d) We do not have enough information

10. Which of the following is the least important indicator of a country's productivity
- (a) The level of physical capital per worker
  - (b) The level of human capital per worker
  - (c) The level of natural resources per worker
  - (d) The amount of technological knowledge in the country
11. A country produces using only labor and capital. It currently has 100 workers and 100 units of capital and produces 100 units of output. If the production follows constant returns to scale and each input has diminishing returns, which of the following is NOT true
- (a) Adding 100 workers will increase output by less than or equal to 100
  - (b) Adding 100 workers and 100 units of capital will increase output by exactly 100
  - (c) Doubling both inputs will also double output
  - (d) Adding 100 units of capital will increase output by more than 100
12. Which of the following is an example of an increase in the technological knowledge of a country
- (a) The country introduces assembly line production which substantially improves productivity
  - (b) The country dedicates additional funds towards public education so more people go to school
  - (c) The country finds a new source of oil
  - (d) The country builds additional factories
13. Diminishing returns to capital means that
- (a) There are not constant returns to scale
  - (b) Countries that have lower levels of capital gain more output than countries with high levels of capital for an equivalent increase in the capital stock
  - (c) Increasing capital in a country with a large amount of capital has a negative effect on growth
  - (d) Small countries always grow faster than large countries
14. Which of the following is the BEST argument against focusing on increasing investment to increase GDP growth
- (a) Research shows that investment usually doesn't increase GDP growth
  - (b) When capital is high, more investment decreases growth
  - (c) Investment requires high levels of government spending, which will be costly for taxpayers
  - (d) Increasing investment requires giving up some consumption today

15. Which of the following is considered investment?
- (a) Putting money into a retirement account
  - (b) Buying stocks on the stock market
  - (c) Purchases of new capital goods
  - (d) Buying a government treasury bond
16. Which of the following assets is likely to have the lowest return?
- (a) Long term US treasury bonds
  - (b) Short term US treasury bonds
  - (c) Stocks from a firm that was established 100 years ago
  - (d) Bonds from new startups
17. The government increases taxes. Assuming consumption depends negatively on taxes, which of the following will be the result of the tax increase according to the loanable funds market?
- (a) Interest rates and investment increase
  - (b) Interest rates decrease and investment increases
  - (c) Interest rates increase and investment decreases
  - (d) Interest rates and investment decrease
18. The government increases spending. Simultaneously, firms reduce their demand for investment. Which do we know will happen for sure?
- (a) Investment increases and we do not know which direction interest rates move
  - (b) Investment decreases and interest rates fall
  - (c) Investment decreases and interest rates rise
  - (d) Investment decreases and we do not know which direction interest rates move
19. We observe that investment falls. We know that
- (a) Interest rates must have increased because investment has a negative relationship with interest rates
  - (b) Interest rates must have fallen because investment demand fell
  - (c) Either demand for loanable funds or supply of loanable funds shifted left
  - (d) None of the above

For questions 20-23, use the following information

$$Y = 10,000$$

$$C = 7000$$

$$T = 1000$$

$$G = 2000$$

$$I = 2000 - 100r$$

20. What is private saving in this economy?

- (a) 1000
- (b) 2000
- (c) 3000
- (d) 4000

21. What is public saving in this economy?

- (a) -1000
- (b) 0
- (c) 1000
- (d) 2000

22. What is the equilibrium interest rate in this economy?

- (a) 5
- (b) 10
- (c) 15
- (d) 20

23. What is the equilibrium quantity of investment in this economy?

- (a) 0
- (b) 1000
- (c) 2000
- (d) 3000

24. An asset will pay \$3000 in 10 years. If the interest rate is 5%, what is the present value of this asset?

- (a) \$285.71
- (b) \$1,841.74
- (c) \$2,857.14
- (d) \$,4886.68

25. An asset is worth \$1000 today and will pay an interest rate of 4% for the next 25 years. What is the future value of the asset in 25 years?
- (a) **\$2,665.83**
  - (b) \$3,652.96
  - (c) \$8,943.56
  - (d) \$26,000
26. A firm is considering building a new factory for \$200,000. The factory will produce \$1 million in profit over the next 20 years (assume they don't receive the profit until the end of the 20 years). What is the highest interest rate the firm would still want to build the factory?
- (a) 1.26%
  - (b) 5.21%
  - (c) **8.37%**
  - (d) 10.26%
27. The efficient markets hypothesis implies all of the following EXCEPT
- (a) The market price includes all publicly available information
  - (b) Stock price movements are difficult to forecast
  - (c) Index funds usually outperform individual investors
  - (d) **Nobody can make money by investing in the stock market**
28. Which of the following is true of a person who is risk averse?
- (a) The utility they receive from winning money is higher than the utility they lose from losing money
  - (b) They have increasing marginal utility
  - (c) Given a choice between a risky option and a safe option, they will always choose the safe option
  - (d) **The more wealth they have, the less they value each additional dollar**
29. Which of the following is an example of adverse selection?
- (a) A person drives more recklessly after buying car insurance
  - (b) **A homeowner in an area with many hurricanes buys flood insurance**
  - (c) A bank makes riskier decisions because they expect a bailout from the government
  - (d) An individual buys the best health insurance because they are very risk averse

30. The portion of unemployment that comes from business cycles is known as

- (a) Frictional unemployment
- (b) Structural unemployment
- (c) Cyclical unemployment
- (d) Voluntary unemployment

For questions 31-33, use the following labor supply and labor demand curves:

$$L^S = 5000 + 500w$$

$$L^D = 20,000 - 1000w$$

31. What is the equilibrium wage?

- (a) 5
- (b) 10
- (c) 15
- (d) 20

32. What is the equilibrium quantity of labor?

- (a) 5,000
- (b) 10,000
- (c) 15,000
- (d) 20,000

33. If a minimum wage of \$15 is imposed, what is the unemployment rate?

- (a) 15%
- (b) 30%
- (c) 45%
- (d) 60%

34. What is the effect of a wage subsidy on the equilibrium wage (not including the subsidy) and the equilibrium quantity of labor?

- (a) Wage and labor increase
- (b) Wage increases and labor decreases
- (c) Wage decreases and labor increases
- (d) Wage and labor decrease



35. Which of the following is true about the labor market and unemployment?
- (a) Labor force participation in the US has been decreasing for over 100 years
  - (b) The majority of US workers today work in the service sector
  - (c) The optimal unemployment rate is 0%
  - (d) The natural rate of unemployment is 6%